

## ADVANCES & INSIGHTS: *The NIH Women in Science Newsletter*

This e-newsletter is brought to you by the NIH Working Group on Women in Biomedical Careers.



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### Recent Research and Perspectives

In August, *Academic Medicine* published a theme issue on gender diversity in academic medicine careers. This issue was compiled thanks to the efforts of the Research Partnership on Women in Biomedical Careers, a grassroots group aimed at closing the gender gap in biomedical research. The Research Partnership formed in 2012 following an NIH-sponsored conference. The invited speakers were funded through a landmark NIH Request for Applications entitled *Research on Causal Factors and Interventions that Promote and Support the Careers of Women in Biomedical and Behavioral Science and Engineering*. At the conference, following completion of their grants, the investigators decided to continue collaborating among themselves and formed the Research Partnership.

This issue of *ADVANCES & INSIGHTS* focuses on articles in the special issue that were written by members of the Research Partnership and NIH staff.



#### Commentary: an integrated framework for gender equity in academic medicine

Westring, A., McDonald, J. M., Carr, P., & Grisso, J. A. (2016).

*Academic Medicine*, 91(8), 1041–1044.

<http://www.ncbi.nlm.nih.gov/pubmed/27276008>

The authors reviewed more than a dozen studies that examined causal factors that promote and support women in biomedical careers. Academic medicine and academic health centers, the authors suggest, can improve gender equity by adopting four distinct but interrelated aspects of culture: providing equal access to resources and opportunities, minimizing unconscious gender bias, enhancing work-life balance, and ensuring leadership engagement.

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## Commentary: advancement of women in the biomedical workforce: insights for success

Barfield, W. L., Plank-Bazinet, J. L., & Clayton, J. A. (2016). *Academic Medicine*, 91(8), 1047–1049.

<http://www.ncbi.nlm.nih.gov/pubmed/27306970>

This commentary explores the themes introduced in a collection of articles organized by the Research Partnership on Women in Biomedical Careers. The authors also highlight the role that government plays in the advancement of women in academic medicine.



## Commentary: striving for gender equity in academic medicine careers: a call to action

Bates, C., Gordon, L., Travis, E., Chatterjee, A., Chaudron, L., Fivush, B., Gulati, M., Jaggi, R., ... Moses, A. (2016). *Academic Medicine*, 91(8), 1050–1052.

<http://www.ncbi.nlm.nih.gov/pubmed/27332868>

The authors offer ideas for coordinating the efforts of organizations, academic institutions, and leaders throughout the scientific and medical professions to reduce barriers that result in gender inequities in Ph.D. programs. Suggestions include facilitating women's access to formal and informal professional networks, acknowledging and addressing the gender pay gap as well as the lack of research funding awarded to women in the field, and updating workplace policies that have not evolved to accommodate women's lifestyles.

## Programmatic efforts at the National Institutes of Health to promote and support the careers of women in biomedical science

Plank-Bazinet, J. L., Bunker Whittington, K., Cassidy, S. K. B., Filart, R., Cornelison, T. L., Begg, L., & Clayton, J. A. (2016). *Academic Medicine*, 91(8), 1057–1064.

<http://www.ncbi.nlm.nih.gov/pubmed/27191836>

The authors review accomplishments and flagship activities initiated by NIH and ORWH in support of women's career development during the 1990s, such as programming to support researchers returning to the workforce after a period away, career development awards, and trans-NIH involvement and activities stemming from the NIH Working Group on Women in Biomedical Careers. The authors say these innovative programs have contributed to advancement of women by supporting the professional and personal needs of women in science, and they conclude with a summary of the impact of these programs.



## Inequities in academic compensation by gender: a follow-up to the National Faculty Survey cohort study

Fruend, K. M., Raj, A., Kaplan, S. E., Terrin, N., Breeze, J. L., Urech, T. H., & Carr, P. L. (2016). *Academic Medicine*, 91(8), 1068–1073.

<http://www.ncbi.nlm.nih.gov/pubmed/27276007>

Several studies have shown that there are gender differences in salaries within academic medicine, but no research has yet assessed longitudinal compensation patterns. This study conducted a 17-year longitudinal follow-up of the National

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Longitudinal analysis of gender differences in academic productivity among medical faculty across 24 medical schools in the United States

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Donna Vogel, M.D., Ph.D.

## Check Out What's New from ORWH!

ORWH launches its new website

Faculty Survey and found that the continued gender gap in compensation cannot be accounted for by metrics used to calculate salary. The women in the study earned a mean of 90 cents for every dollar earned by their male counterparts.



### **Longitudinal analysis of gender differences in academic productivity among medical faculty across 24 medical schools in the United States**

Raj, A., Carr, P. L., Kaplan, S. E., Terrin, N., Breeze, J. L., & Freund, K. M. (2016). *Academic Medicine*, 91(8), 1074–1079.

<http://www.ncbi.nlm.nih.gov/pubmed/27276002>

This study examined gender differences in academic productivity, as indicated by publications and federal grant funding acquisition, among a longitudinal cohort of medical faculty from 24 U.S. medical schools between 1995 and 2013. The authors found that women acquired federal funding at similar rates as men but lagged behind in terms of publications and their impact.



### **Analysis of National Institutes of Health R01 application critiques, impact, and criteria scores: does the sex of the principal investigator make a difference?**

Kaatz, A., Lee, Y.-G., Potvien, A., Magua, W., Filut, A., Bhattacharya, A., ... Carnes, M. (2016). *Academic Medicine*, 91(8), 1080–1088.

<http://www.ncbi.nlm.nih.gov/pubmed/27276003>

In 2009, NIH altered its peer review process after suggestions that the process may have been biased against women applicants. The authors studied whether that alteration made a difference. They found that subtle gender bias may continue to operate in the post-2009 NIH review format in ways that could lead reviewers to implicitly hold male and female applicants to different standards of evaluation, particularly for R01 renewals.



### **A mixed-methods investigation of the motivations, goals, and aspirations of male and female academic medical faculty**

Jones, R. D., Griffith, K. A., Ubel, P. A., Stewart, A., & Jagsi, R. (2016). *Academic Medicine*, 91(8), 1089–1097.

<http://www.ncbi.nlm.nih.gov/pubmed/27254012>

Researchers sought to understand the goals and aspirations of the physician-scientist workforce and the gender differences therein by surveying an elite research-oriented sample of NIH career development awardees and their mentors. The authors found that gender differences in career aspirations were limited and, therefore, any differences in career outcomes probably resulted from evolving goals in response to career challenges.

### **Gender, race/ethnicity, and National Institutes of Health R01 research awards: is there evidence of a double bind for women of color?**

Ginther, D. K., Kahn, S., & Schaffer, W. T. (2016). *Academic Medicine*, 91(8), 1098–1107.

<http://www.ncbi.nlm.nih.gov/pubmed/27306969>

The authors analyzed whether gender or race/ethnicity influenced the likelihood of being awarded an NIH R01 grant between 2000 and 2006. They found that white women Ph.D.s and M.D.s were as likely as white men to receive an R01 award but that Asian and black women Ph.D.s and black women M.D.s were significantly less likely to receive funding than white women. Women also submitted fewer grant applications than men.

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### **Variability in women faculty's preferences regarding mentor similarity: a multi-institution study in academic medicine**

Carapinha, R., Ortiz-Walters, R., McCracken, C. M., Hill, E. V., & Reede, J. Y. (2016). *Academic Medicine*, 91(8), 1108–1118.

<http://www.ncbi.nlm.nih.gov/pubmed/27332871>

Researchers investigated which characteristics were rated most important in a mentor by women faculty in academic medicine and whether this rating differed among women faculty on the basis of current and prior mentoring, demographic and personal factors, and career factors. Overall, respondents ranked having a mentor in the same department and institution as most important, but there were important variations based on race/ethnicity.



### **How women in biomedical Ph.D. programs manage gender consciousness as they persist toward academic research careers**

Remich, R., Jones, R., Wood, C. V., Campbell, P. B., & McGee, R. (2016). *Academic Medicine*, 91(8), 1119–1127.

<http://www.ncbi.nlm.nih.gov/pubmed/27254008>

Despite being underrepresented as biomedical faculty, some women retain their interest in academic research careers during Ph.D. training and are the most likely candidates for faculty positions. Using interviews, the authors explored how women biomedical Ph.D. students described and interpreted gender issues at early stages in their training, finding that the students continue to face conditions that can lead to unequal treatment.

### **Measuring diversity of the National Institutes of Health-funded workforce**

Heggeness, M. L., Evans, L., Pohlhaus, J. R., & Mills, S. L. (2016). *Academic Medicine*, 91(8), 1164–1172.

<http://www.ncbi.nlm.nih.gov/pubmed/27224301>

The authors used survey and administrative data to examine staff diversity rates of the NIH-funded biomedical workforce between 2008 and 2012. The study found that women and traditionally underrepresented groups were better represented in NIH-supported postdoctoral fellowships and traineeships and mentored career development programs than in the labor market as a whole but that they were not as well represented in the NIH-funded independent investigator pool.



### **Factors associated with attainment of specialty board qualifications and doctors of medical science degrees among Japanese female doctors**

Chatani, Y., Nomura, K., Ishiguro, A., & Jagsi, R. (2016). *Academic Medicine*, 91(8), 1173–1180.

<http://www.ncbi.nlm.nih.gov/pubmed/27276005>

In Japan, specialty board qualifications or doctor of medical science degrees are essential for women's promotion to leadership positions in medicine. Researchers examined what personal and professional characteristics were associated with women's abilities to obtain these qualifications and degrees, finding that women who resigned from their jobs instead of taking maternity leave for the birth of their first child had a significantly lower likelihood of obtaining either designation.

# Spotlight

## Scientist Spotlight



### Donna Vogel, M.D., Ph.D.

Donna L. Vogel, M.D., Ph.D., dedicated 25 years of service to NIH, from conducting research on reproductive medicine to becoming the first Director of the Fellowship Office at the National Cancer Institute. Although she is currently retired, Dr. Vogel continues to volunteer for numerous organizations and mentor young, enthusiastic scientists.

Dr. Vogel is a graduate of Bryn Mawr College and the Albert Einstein College of Medicine. In 1980, she came to NIH as a clinical fellow and postdoctoral researcher, conducting clinical and basic research relating to infertility and reproductive medicine. Her research trajectory was quite diverse—from studying the differentiation of neurons in the Mexican axolotl to studying spermatogenesis in neonatal rats to combined basic research on pituitary gonadotropin biosynthesis and clinical research on male infertility. She moved to the NIH extramural program in 1987 to manage the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development Reproductive Medicine grant portfolio. Dr. Vogel is also a 4-day Jeopardy! winner and 2009 Tournament of Champions semifinalist...[\(read more\)](#)

### Did you know?

The NIH Committee on Women of Color in Biomedical Careers recently created a new NIH Women of Color Research Network group on LinkedIn. The committee will post information about events and highlight relevant news articles, and group members will be able to network. To view and join the group, please visit <https://www.linkedin.com/groups/8501207>.

## Check Out What's New from ORWH!

ORWH is excited to reveal its brand new website. The updated site features an engaging, user-friendly design that functions beautifully across desktops, tablets, and phones. You will find the same important ORWH content along with new prominent spotlights, including the Raising the Bar report, the Women of Color Health Data Book, and the Sex and Gender courses. Check out the new site and share it with your friends and colleagues: <http://orwh.od.nih.gov/>.